

Application No. 10/776,405
Amendment Dated May 27, 2008
Reply to Office Action of February 26, 2008

REMARKS

In the Office Action dated February 26, 2008, claims 5-9 were examined with the result that all claims were rejected. Claims 1-4 and 25-26 were previously canceled, and claims 10-24 have been previously withdrawn from consideration. In response, applicant submits the following remarks. In view of these remarks, reconsideration of this application is requested.

In the Office Action, the Examiner rejects claims 5-9 on the grounds of non-statutory obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent 6,692,839. As the '839 patent is the parent application of the present divisional application, applicant once again states it will file an appropriate Terminal Disclaimer to obviate this double patenting rejection upon the indication of allowable subject matter by the Examiner.

In the Office Action, claims 5-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Furuta et al U.S. 6,551,371. The Examiner's basic position is that Furuta et al discloses 7 wt. % aluminum and therefore this disclosure reads on "about" 9 wt. % aluminum claimed by applicant. This is because the Examiner believes 7 wt. % aluminum is close enough to 9 wt. % aluminum that one of ordinary skill in the art would have expected the alloys to have the same properties. Finally, the Examiner indicates that applicant has not shown that its coating would not suffer the same brittleness as disclosed by Furuta et al.

With regard to the Examiner's position that about 9 wt. % aluminum encompasses and reads on 7 wt. % aluminum disclosed by Furuta et al, applicant respectfully disagrees that about 9 wt. % aluminum has the same meaning as 7.0 wt. % aluminum, especially in the present circumstances claiming a titanium alloy composite coating. Applicant first notes that in the present art, i.e. alloy composites, small changes in composition can result in significant changes in properties. Applicants respectfully submit that "about 9 wt. %" includes some rounding, but would not cover a difference of as much as 28.6% and would therefore not include "7.0 wt. %." In this instance, going from 7.0 wt. % to 9 wt. % is a change of 28.6%. Clearly, the word "about" would not mean such a large change, especially to one skilled in this art.

It must further be recognized that the 7.0 wt. % value disclosed by Furuta et al, whether read as an absolute value or as a potentially variable value, is a teaching as to the limits of

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operability contemplated by Furuta et al, who are presumptively persons of at least ordinary skill in the art (and may be persons of extraordinary skill in the art as to the specific subject matter of the present disclosure). The inventors of Furuta et al have a motivation to articulate the maximum range which can be contemplated in which the aluminum content may conceivably be employed. After all, the scope of protection, if any, is limited by the range stated.

The Furuta et al '371 patent follows a conventional pattern of articulating additional or preferred ranges of decreasing scope, namely a broad range of 3.0 to 7.0% by weight of aluminum and "the content of the aluminum can further preferably be 4.0-6.5% by weight." (see column 5, lines 42-44). The Examiner will readily recognize that this kind of ranging description translates as follows:

1. Furuta et al considers that an aluminum content of 4.0 - 6.5% by weight will result in the desired properties in most circumstances.

2. Furuta et al believes that a value somewhere in the range of 3.0 - 7.0% by weight aluminum will most likely work in most contemplated applications to improve the high temperature strength and creep properties of the alloy.

3. The improvement of high temperature strength and creep property is "not expected" when the content of the aluminum is "less than 3.0%" and/or "exceeds 7.0% by weight." (see column 5, lines 32-41).

These criteria, or equivalents thereof, are in fact how such ranges are typically arrived at by those skilled in the art. Thus, applicants submit that the Examiner would agree that an inventor, in articulating the broadest of several ranges, selects a range that the inventor believes to be even marginally operative, or operative only under exacting conditions. The inventors, in drafting the broad range, have already applied their skill to the problem of identifying what the outer limits of operability are and have concluded that they do not believe they can be extended beyond the lower limit and/or upper limit articulated. As a consequence, it is not reasonable to assert that the Furuta et al reference either teaches or suggests a composition outside the broadest range articulated. Under the circumstances of drafting a patent application document, if the inventors had thought otherwise, they would have said so.

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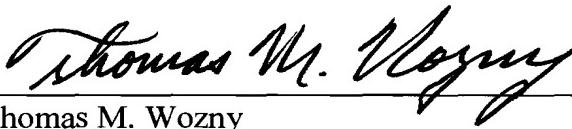
Also, in this case, the Furuta et al inventors contemplated a range of weight percent expressed in tenths of a percentage level, since the broad range is expressed as 3.0 - 7.0% by weight aluminum (see column 5, line 2) and the preferred range is described as "4.0 - 6.5% by weight" (see column 5, line 44). This, taken with the fact that the inventors in Furuta et al are motivated to express the lowest and highest range of aluminum considered operable under any condition, forces a conclusion that 7.0 wt. % aluminum or even "about 7.0 wt. % aluminum" does not encompass 9 wt. % aluminum or "about 9 wt. % aluminum" as claimed by applicant.

With regard to the Examiner's position that applicant has not provided any evidence that applicant's claimed aluminum content would not suffer the brittleness as disclosed by Furuta et al, applicant refers the Examiner to Example 3 in the specification, and particularly, page 21, lines 14-17. The Examiner will note that applicant discloses that the aluminum particles in the composite were "still dense, showing no signs of cracking or spallation..." Applicant specifically notes that the coating did not have any "cracking" which would indicate brittleness at these temperatures. Thus, applicant believes it has demonstrated that the presently-claimed coating, having "about 9 wt. % aluminum" would not suffer the same brittleness as the composite of Furuta et al.

As a result, applicant requests the Examiner withdraw the obviousness rejection based upon Furuta et al.

Respectfully submitted,

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